

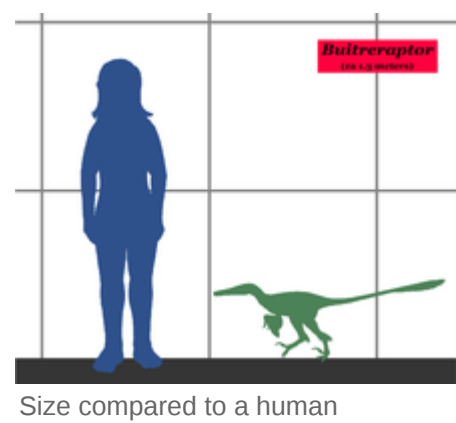
# Buitreraptor

***Buitreraptor*** is a predatory dromaeosaurid theropod dinosaur from the Cretaceous of Argentina.

*Buitreraptor* was described in 2005. The type species is *Buitreraptor gonzalezorum*. It was rooster-sized and had a very elongated head with many small teeth.

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## Description



*Buitreraptor* was a rather small dinosaur. In 2010, Gregory S. Paul estimated the length at 1.5 metres, the weight at three kilograms.<sup>[1]</sup>


*Buitreraptor* has some different physical features than typical northern dromaeosaurs, such as Velociraptor.

*Buitreraptor* has a slender, flat, extremely elongated snout with many small teeth that lack meat-tearing serrations or cutting edges and are grooved, strongly recurved and flattened.<sup>[2][3]</sup> From this, the scientists who initially described it concluded that this dinosaur was not a hunter of relatively large animals like some other dromaeosaurs, but rather a hunter of small animals such as lizards and mammals. The forelimbs of *Buitreraptor* were long and ended in very long and thin three-fingered hands. All known parts of the hand of *Buitreraptor* are proportionally longer than in the dromaeosaurids Deinonychus and Velociraptor, except for the ungual bones which are proportionally smaller in *Buitreraptor*.<sup>[4]</sup>


**Buitreraptor**

Temporal range: Late Cretaceous, 94 Ma

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Cast mount at the Field Museum of Natural History

**Scientific classification** 

Kingdom:	Animalia
Phylum:	Chordata
Clade:	Dinosauria
Clade:	Saurischia
Clade:	Theropoda
Family:	†Dromaeosauridae
Subfamily:	†Unenlagiinae
Genus:	† <i>Buitreraptor</i> Makovicky et al, 2005
Species:	† <i><b>B. gonzalezorum</b></i>

**Binomial name**

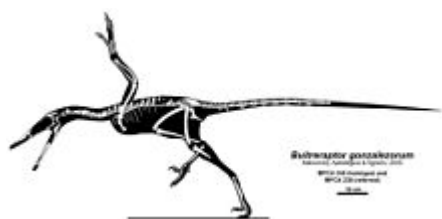
†***Buitreraptor gonzalezorum***  
Makovicky et al, 2005

The body as a whole was also elongated, with a shallow ribcage. The enlarged sickle claw at the second toe of the foot formed a blade that was long although less large than in dromaeosaurids such as Velociraptor and Deinonychus.<sup>[4]</sup>

No fossil discoveries have been made of any feathers of *Buitreraptor*. However, there are relatives like *Microraptor* and *Sinornithosaurus*, of which fossils with preserved feathers are known. Since its close relatives had feathers, it is likely that *Buitreraptor* also was feathered. According to Apesteguia, this is comparable to reconstructing an extinct monkey with fur because all modern monkeys have fur.<sup>[5]</sup>

## Discovery and naming

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Skeletal restoration showing some known remains of *B. gonzalezorum*

Four skeletons of *Buitreraptor* were found in 2004 in sandstone in Patagonia, Argentina during an excavation led by Sebastián Apesteguia, researcher of CONICET at the Fundacion Felix de Azara - Maimonides University, and Peter Makovicky, curator of dinosaurs at the Field Museum in Chicago.

*Buitreraptor* is from the early Late Cretaceous Candeleros Formation, dating to the Cenomanian-Turonian, about 94 million years ago, when South America was an isolated continent like Australia today. It was uncovered in a famous fossil site named *La*

*Buitrera*, the "vulture roost". Although dinosaurs are rare in this site, another nearby site had earlier yielded *Giganotosaurus*, one of the largest known carnivorous dinosaurs.<sup>[6]</sup>

*Buitreraptor gonzalezorum* is the only known species of the genus *Buitreraptor*. It was named by Makovicky, Apesteguía and Federico Agnolín. The genus name means "vulture raider", from the Spanish word *buitre* meaning vulture, in reference to *La Buitrera*, and Latin raptor, "seizer". The specific name honours the brethren Fábian and Jorge González who realised much of the actual excavation and preparation of the fossils.<sup>[6]</sup>

The holotype specimen, **MPCA 245**, consists of a partial skeleton with skull of an adult individual. The paratype is MPCA 238, a sacrum with a right pelvis and right hindlimb.<sup>[6]</sup> The skull of the holotype was described in detail in 2017,<sup>[7]</sup> while 2018 saw a slew of new papers on the anatomy of the genus. These include descriptions of new specimens,<sup>[4]</sup> a study on the tail anatomy of the genus,<sup>[8]</sup> and a general overview of the postcrania of multiple specimens.<sup>[9]</sup>



Mounted skeleton, Royal Ontario Museum, Toronto, Canada

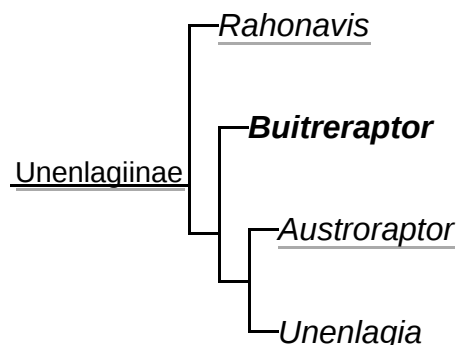
## Classification

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*Buitreraptor* shows a mosaic of dromaeosaurid, troodontid and avialan traits. It was in 2005 assigned to the Dromaeosauridae. A cladistic analysis by the describers showed it was part of the dromaeosaurid Unenlagiinae.

The discovery of *Buitreraptor* has also been the subject of discussion among scientists as to the question whether flight could have evolved independently in birds and dromaeosaurids or was derived from some flying common ancestor.<sup>[10]</sup> Some scientists propose that *Rahonavis*, a relative to *Buitreraptor*, could fly. However, evidence for flight has not been unequivocally found in other dromaeosaurids, which has led some scientists to propose that dromaeosaurids evolved flight independently of birds if *Rahonavis* could indeed fly.

The following cladogram is based on the phylogenetic analysis conducted by Turner, Makovicky and Norell in 2012, showing the relationships of *Buitreraptor* among the other genera assigned to the taxon Unenlagiinae:



*Buitreraptor* (front) and *Deinonychus* (back) skeleton casts at the Field Museum of Natural History

## Evolution

Other than *Buitreraptor*, the only other known dromaeosaurs from the southern continents are *Neuquenraptor*, *Austroraptor*, and *Unenlagia* from South America (discovered earlier in 2005), *Rahonavis* (once thought to be a true avian bird) from Madagascar, and unidentified dromaeosaur-like teeth from Australia. This discovery in the Southern Hemisphere helped scientists to clarify that the dromaeosaur family was more widely dispersed around the world than previously thought. Evidence indicates that dromaeosaurs first appeared during the Jurassic Period, when all the continents were much closer together than they are today. With the discovery of *Buitreraptor*, the scientists proposed that dromaeosaurids originated somewhere around 180 million years ago, before Pangaea broke up.<sup>[6][11]</sup> However, other paleontologists have in later studies placed the time of origin for Dromaeosauridae to about 160 million years ago.<sup>[12]</sup>



Restoration

The scientists see it as an alternative possibility that dromaeosaurids originated on the ancient continent Laurasia in the north and during the Cretaceous Period migrated to southern Gondwana, since the species known from the Southern Hemisphere bear distinctive characteristics not shared by their northern relatives. La Buitrera also yielded remains of terrestrial crocodiles, pterosaurs, the largest known rhynchocephalians, limbed snakes, iguanian lizards, chelid turtles, mammals, and dipnoan fishes<sup>[6]</sup>

## See also

- Timeline of dromaeosaurid research

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## External links

- **BBC News**: Bird-like dinosaur forces rethink (<http://news.bbc.co.uk/1/hi/world/asia-pacific/4337888.stm>), 13-Oct-2005

- Drawing and some details (<https://web.archive.org/web/20060925140024/http://internt.nhm.ac.uk/jdsml/nature-online/dino-directory//detail.dsml?Genus=Buitreraptor>) from the Natural History Museum, London.
  - National Science Foundation web site ([https://www.nsf.gov/news/news\\_summ.jsp?cntn\\_id=104498](https://www.nsf.gov/news/news_summ.jsp?cntn_id=104498))
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